DOCUMENT RESUME

ED 050 442 EA 003 426

AUTHOR	Vantine, A. William
TITLE	Implications of Negotiation Theory for Bargaining Between Teachers and School Boards.
PUB DATE	4 Feb 71
NOTE	20p.; Paper presented at American Educational Research Association Annual Meeting (55th, New York, New York, February 4-7, 1971)
AVAILABLE FROM	Mr. A. William Vantine, Director of Personnel, Mt. Lebanon School District, Bower Hill Rd. at Moffett St., Pittsburgh, Pennsylvania 15243 (Free)
EDRS PRICE	EDRS Price MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	*Collective Negotiation, *Conflict Resolution, *Game Theory, *Models, *Negotiation Agreements, Speeches

ABSTRACT

This paper uses a formulation involving concepts of pure, mixed, and mutual accommodation bargaining. The formulation draws on concepts used in game theory, labor negotiations, and theories of conflict resolution; and a number of vaiables are examined in an effort to make sense out of collective negotiations. A changing utility model is developed that can be used to plot changes in disposition and record payoffs that accrue as a result of bargaining over numerically based pure bargaining issues. The formulation was tested in a case study of negotiations. The findings of the study may be used to expand bargaining theory for education and provide insights into the collective negotiations process. (Author)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL BY MICROFICHE ONLY HAS BEEN GRANTED BY A. William Vantine
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

ED050442

IMPLICATIONS OF NEGOTIATION THEORY FOR BARGAINING BETWEEN TEACHERS AND SCHOOL BOARDS

A. WILLIAM VANTINE

INTRODUCTION

This paper is designed to report, in part, a conceptualization that can be used to understand methods of bargaining that occur in collective negotiations. The formulation contains concepts drawn from game theory, labor negotiations and theories of conflict resolution.

The conceptualization was used in a case study to make sense out of teacher-school board negotiations. The finding of the study may be used to expand bargaining theory for education and to provide insights into the collective negotiation process.

Bargaining Methods

Two distinctly different methods of reaching agreement are apparent in collective negotiations. Pure bargaining is a highly "conflictual" experience in which one party demonstrates and uses its bargaining power to coerce the other party into granting concessions. Mutual accommodation is a low conflict process by which each party makes concessions to the extent that the other party demonstrates a need for assistance.[1] It is primarily joint problem solving in which each party gains benefits from the solution to a problem.

These two methods of reaching agreement can be thought of as polar positions on a continuum. Mixed bargaining is the fusion of the tactics ascribed to pure bargaining and elements inherent in mutual accommodation applied to the resolution of differences over items or sets of items. The concepts of pure bargaining and mutual accommodation were used by Schelling (1960) in his development of a framework for the expansion of game theory.[2] Walton and McKersie (1965) referred to the major methods of reaching agreement in an industrial setting as distributive and integrative bargaining.[3] Pruitt (1968) uses the terms pure bargaining and mutual responsiveness to develop a conceptualization of negotiations as a form of social behavior.[4]

Bargaining Power

Bargaining power is a significant factor in each method of reaching agreement.

EA 003 426

© A. William Vantine, 1971

Bargaining power as used in this formulation, is defined as the ability to obtain concessions and satisfy or refrain from satisfying an opponent's needs. Bargaining power is a two dimensional concept. It increases or decreases with the quantity and quality of the human components that comprise an organization and with the topics that are brought to the negotiating table. Bargaining power does not remain constant during the negotiation process but changes as the human inputs that affect the state of an organization vary, and fluctuates with the items and/or set of items that are being negotiated. Items are issues or problems that are topics of negotiations but are not identified by the method of negotiations used to resolve them. Issues are "conflictual" demands used to describe topics acted upon in pure bargaining situations. Problems are cooperative undertakings used to describe topics acted upon in mutual accommodating situations.

A tactic is a maneuver used in collective negotiations to gain an advantage. Stevens states that "changes of tactics should be viewed as the use of existing bargaining power to gain objectives rather than changes in the magnitude of bargaining power."[5] Paradoxically, in bargaining some forms of weakness may constitute bargaining strength. For, to place an opponent in an apparently untenable position to his constituency, on an issue or set of issues that are extremely important to obtain or reject, will tend to increase the opponent's bargaining power on the issue or issues in question. Bargaining power is effective only if it can be perceived or sensed by the negotiators and can convince the weaker party to make concession or the stronger party to satisfy needs.

Bargaining power can be decreased by those things which lower the cost of agreement to an opponent or raise the relative cost of disagreement. Yet, it is dependent as much upon what each party is seeking to obtain as it is upon each party's coercive ability.[6] In essence, bargaining power may be used by one negotiator or negotiating team to influence the behavior of the other so as to change the probabilities that the other will respond to certain stimuli. The amount of influence one has over the other is the weight or degree of power. Since bargaining power can be operationally defined, it may lend itself to rough empiricim on selected issues in a true bargaining situation. True bargaining occurs between employees and employers over salary and terms and conditions of employment.

Origins of Bargaining Power

An employee organization's degree of bargaining power is affected by the size of the unit, its cohesiveness, the type of personnel represented, the quality of leadership, character and choice of a negotiating team, and the objectives of the organization. Bargaining power enables a negotiator to grant rewards or coerce his opponent, hold a legitimate position which enables him to wield his influence, and exercise the expertise that he has as a negotiator.

A study by Goe lends support to the premise that neither negotiator will prevail in his knowledge of all the items on the table but it also lends credibility to the statement that a negotiator who is well schooled in the topics and tactics of negotiation will have a tendency to increase his bargaining power.[8] This point receives some support from limited laboratory studies conducted by Bartos. He found that experience and learning alone accounts for much of the behavior displayed in negotiations.[9]

Pure Bargaining

Pure bargaining is a method by which opposing parties reduce their demands by granting concessions until a level is reached where each side can accept agreement. Three motives of pure bargaining are applicable to this formulation. Each motive constitutes a different phase of the bargaining process.

Motive One - Moving the Opponent Toward One's Own Position

Motive One consists of "moving" the opposing party toward the negotiator's own position. A move is defined as a change in position from one alternative to another. The structural elements that a move depends on are threats, enforcement, and the capacity to communicate or destroy communications.[10] A move requires the opponent to make concessions based on the negotiator's ability to persuade his opponent that it is in his own best interest to concede by using pressure tactics such as threats and commitments, and persuasive tactics or appeals to reason to alter specific positions.[11] Moves communicate a negotiator's value system or can be used to disguise it.[12]

Pressure Tactics

Threats

Deutsch and Krause define a threat as the expression of an intention to

do something which is detrimental to the interest of another.[13] The motive behind a threat is to coerce, deter or constrain the other negotiator's choice of action.[14] There are two types of threats: overt threats are direct and explicitly stated, covert threats are disguised and require interpretation by the threatened party regarding their meanings and implications.

A threat works if it changes the other negotiator's expectation of how the threatener will react. It is an attempt to alter the threatener's own incentives as they are perceived by the threatened party.[15] Schelling states:

> the threatener risks having to retaliate in the hope that, by the sheer act of creating the risk, he will deter the act that reaction is made contingent on. There is consequently a motive to make the threat but not to carry it out. More correctly, there is a motive to bind one's self so that fulfilling the threat is obligatory; but if the threat fails so that it has to be carried out, the only motive for carrying it out is the obligation that was deliberately incurred earlier plus any motive arising from the likelihood that fulfillment in this case increases the potency of some further threat.[16]

A threat is meaningful only if the consequences would cause worse damage to the threatened party than to the threatener.[17] Rapoport emphasizes that each threat, if carried out, involves a cost to the threatener as well as his opponent. The trick is to use the most effective threat to minimize potential costs.[18]

Commitments

Schelling refers to a commitment as a strategic move, a move that requires the other negotiator to choose in one's favor. It limits the other negotiator's choice by changing his expectations about one's behavior.[19] It involves communicating inflexibility to another thereby making it clear to him that no more further concessions are possible and that he will have to make a concession if the parties are to obtain closure.[20] This tactic can be successful in obtaining concessions from the other party if and only if, the commitment is above the opponent's clearly understood and defined minimal disposition. The least favorable terms at which a negotiator would prefer agreement to no agreement is called the negotiator's minimal disposition.[21] The successful use of a commitment involves discovering the other negotiator's minimal disposition and

making a commitment to grant him just that much and no more.[22] Schelling states that:

> The threat is related to the commitment in two ways. First, like the commitment, it is a surrender of choice, a renunciation of alternatives, that makes one worse off than he need be in the event that the tactic fails; the threat and the commitment are both motivated by the possibility that a rational second player (negotiator) can be constrained by his knowledge that the first player (negotiator) has altered his own incentive structure. Both tactics are intended to rig one's own incentive structure so that the other player (negotiator) is left the initiative and will be induced to choose in the first player's (negotiator's) favor.
>
> Second, the threat is related to the commitment in that it depends on it; the threat can constrain the other player (negotiator) only insofar as it carries to the other player (negotiator) at least some appearance of obligation. If one is not committed to the threat in any way and cannot even seem to be committed, it is ineffectual.[23]

Threats differ from commitments, in that in the former one's courses of action are conditioned on the other negotiator's response, while in the latter a negotiator fixes his course of action.

Appeals to Reason

A negotiator's attempt to persuade his opponent that it is in his own best interest to concede based on logical arguments are called appeals to reason. It is assumed that the stronger the appealing party feels his bargaining power to be on specific issues, the more reasonable and convincing his argument and the lower the cost (in terms of money and administrative autonomy and flexibility to the board and its advisors and in terms of support from the faculty for the teachers' organization) of submission on the issue.

To move an opponent toward one's position requires a negotiator to obtain information about his opponent's concession points.

Techniques of Obtaining Information

A negotiator's disposition or attitude toward a move may reveal the point at which he will make a concession. Techniques of obtaining information or clues about an opponent's concession points during negotiations include assessing the direct content clues dropped in negotiations and forcing the opponent to tip his hand. The

former can be obtained from keen observation and accurate record keeping. The latter includes some specific techniques, some of which are: directing questions to a less-coached member of the opponent's team; personally abusing the opposing negotiator, showing signs of exaggerated impatience over an opponent's failure to move, implying overt threats without using them, and displaying emotional reactions over an opponent's position.

It may be reasonable to assume that the more reluctant an opposing negotiator is to concede on issues that are important to his adversary the more likely the adversary will be to resort to these kinds of techniques.

Off the record comments made away from the table, remarks dropped by naive parties, insights of team members concerning issues and personalities, and general feedback regarding the attitudes of personnel in both organizations can serve to provide a negotiator with valuable information needed to identify his opponent's attitude toward making a concession.

Motive Two - Impressing One's Own Reference Group

The second motive of pure bargaining requires one to impress his own reference group. Pruitt states that most negotiators act as agents and hence, must impress a constituency in order to retain their offices and keep their autonomy.[24]

In collective negotiations two types of negotiators may be used. Those internal or external to the system.

An external or professional negotiator may have a distinct advantage over a teacher or board negotiator in performing pure bargaining tasks for he is not forced to live with a contract or with the personnel who faced him across the table.

Although the investigator knows of no specific quantitative evidence in public education to substantiate his statement, he assumes that the employment of a professional negotiator will tend to toughen the attitude of the opposing party in reaching agreement.

Motive Three - Reaching Agreement

Pruitt states that, "both parties are motivated to reach agreement because the cost of no agreement is seen as larger than what may possibly be gained from agreement."[25] This statement takes on a particular twist when applied to public education. The costs to a

board of education are significantly different from those experienced in the private sector. A school system deals in services rather than consumable items. Therefore, costs tend to be primarily political rather than economic weapons.

Statute law in most states does not force either party to sign an agreement; even a fact-finder's ruling is in no way binding in the absence of mutual agreement. In some instances a school board or teachers' organization may be willing to take risks to defeat its opponent or satisfy economic or political objectives. It is also conceivable that agreements may not be reached because the minimal dispositions of both parties are too far apart for the parties to reach agreement. However, the preceding statement does not imply that minimal dispositions have remained stable during all stages of negotiations.

Often, the granting of concessions can cause the negotiator to face a conflict of interest, for in spite of the fact that a concession must be made if agreement is to be reached, the contents of the concession will serve to betray the negotiator's minimal disposition. Faced with this dilemma the negotiator may refrain from making concessions unless he is forced to or he may resort to pressure tactics in an attempt to cover his own weakness and force the other party to submit to his demands.[26]

It is apparent that reaching agreement is in opposition to "moving the other party toward one's own position," and "impressing one's own reference group." For agreement to be reached a shift in attitudes of one or both of the parties must occur. This motive embodies a willingness of the negotiator to make concessions if concessions by the opponent are forthcoming. Yet, it is conceivable that the party who perceives that he has the least bargaining power will concede on issues that are more valuable to his team than the stronger party. Trading of concessions then are actually tactical commitments or bilateral promises that will benefit both parties to some degree. The practice of getting something for what is given is called a <u>tradeoff</u>.

For a negotiator to make a concession he must legitimize the move in some respect to his own team but especially to his opponent. Failure to clothe a concession with reason will leave the negotiator in a vulnerable position, for his opponent is apt to view such a move as a weakness in bargaining power rather than a move toward agreement.[27] The misinterpretation of such a move could convey the message to one's opponent that he would be

willing to make additional concessions. One might speculate then that if both parties know the "rules of the game" they will try to provide their opponent with additional information, or shift the line of reasoning, so as to provide the opponent with a face saving rationale for retreat. Such retreats can be enhanced by indirect communications.

Indirect communications consist of informal discussions between the parties; "off the record" remarks and sign language, i.e. indirect verbal signals concerning a negotiator's willingness to concede or remain firm; and nonverbal signs.[28] Nonverbal signs are physical motions that convey an intended message. Personal experiences in negotiations suggest that nonverbal signs tend to increase in the agreement stage of negotiations. They serve as subtle indicators of a negotiating teams' disposition to move or hold firm on specific issues.

If the parties are unable to agree on the terms of an agreement, then mediation or fact-finding may occur. It is the mediator's role to facilitate agreement. A principle of equity may be inherent in this role; however, it is agreement, not equity that is the mediator's primary motive. Bartow, in a limited laboratory study, found that a mediator will tend to have a bias towards endorsing the proposal that was last endorsed by the parties.[29] Mediation then is an extension of negotiations.

Fact-finding in collective negotiations resembles advisory arbitration used in collective bargaining. Some states assign the same party to school districts to serve as both a mediator and a fact-finder. If the previous assumption regarding the mediator's primary motive is valid, it is apparent that the mediator/fact-finder's ability to reach a rational and impartial decision must be questioned as a result of his participation in the negotiation process.

Summary of Pure Bargaining

Three motives of pure bargaining, techniques of obtaining information, methods of identifying content clues, and breakdown procedures have been discussed. The complexities of pure bargaining are apparent from this formulation. To attempt a thorough analysis of the collective negotiation process on all issues would be a nearly impossible task. However, selected bargaining issues can be examined. To aid in the examination, a model adapted from international negotiations may be used.

An Adapted Pure Bargaining Model

Schelling (1960)[30] Ikle and Leites (1962)[31] and Walton and McKersie (1965)[32] do not recognize stable utilities where negotiations are concerned. They contend that negotiations are psychological in nature. This concept takes into account changes in preference, in distinction to the act of preference which occurs at the time a choice is made and which can be used operationally to define utility at that time. A disposition to prefer is defined as the negotiator's estimate that he will prefer one alternative over another if and when he has to make a choice. The most important choice is that between "agreement at given terms" and "an impasse and/or no agreement." The least favorable terms at which a negotiator would prefer agreement to no agreement is called a negotiator's minimum disposition (at time t).[33]

To construct a changing utility model for selected issues in pure bargaining it is necessary to assume that pure bargaining deals with issues where the two sides have a conflict of interest in one set of mutually exclusive alternatives for each issue, (issue a,b,c,...N) and one side always prefers a to b, b to c...(N - 1) to N, while preferences of the other side are in reverse order.[34]

An estimated bargaining range for both sides extends along the continuum of alternatives from each team's minimal disposition to its estimate of the opponent's minimal disposition. A sham bargaining position constitutes any alternative on the continuum either above for the demanding party's or below for the responding party's estimate of its minimal disposition.[35] A negotiator's change in bargaining position from one he prefers more to one he prefers less is called a sham concession if the two positions lie in his sham bargaining range and a genuine concession if they fall within his genuine bargaining range.[36] A payoff is the settlement obtained in negotiations.[37] (Figure - page 17)

Some selected, numerically-based pure bargaining issues (salary, leave days, etc.) will remain on the table throughout negotiations and will be modified by the interaction process to the extent that changes in dispositions and outcomes can be recorded.

The principal objective of pure bargaining is to modify the opponent's estimate of one's probable outcomes and minimum dispositions. A danger lies in the fact that third

parties that seek to resolve impasses may mistake the differences between prominent demands of the parties and the initial position of the parties as the actual bargaining range. They may then estimate that the probable outcome should be between the two extremes rather than within the actual bargaining range.

The model for selected numerically based pure bargaining issues may enable an investigator to obtain a more accurate picture of the changes that occur in the negotiator's dispositions and perceived outcomes. Findings of this type will enable an investigator to understand better the antecedents that combine to form an agreement between the parties.

Mutual Accommodation

Mutual accommodation is a significant cooperative venture directly in opposition to the "conflictual" aspect of pure bargaining. In pure bargaining situations opponents attempt to modify each other's positions to the extent that a settlement may reflect a compromise or even a win-lose solution. Mutual accommodation results in joint problem solving and provides a method by which both parties make gains. Yet, cooperation does not necessarily include the principle of equity for both parties. "One party may even suffer minimal inconveniences in order to provide substantial gains for the other."[38] The negotiator who gives up the most to submit to the other usually expects to receive reciprocal treatment from the other in another problem area that will yield him substantial benefits. Mutual accommodation requires trust between the parties in order for them to honestly present their needs and discuss their aspirations without regard to the effort needed to solve problems and without forming preconceived solutions.[39]

It is assumed that even in a problem solving situation the party who perceives itself as being weaker will have a tendency to patronize the stronger party.

Unlike an issue which is usually resolved by compromise, mutual accommodation of a problem generates new solutions and requires different communication techniques than those used in pure bargaining. Walton and McKersie indicate that the more channels of communication available and the more frequently they are used, the more likely it will be for problem solving to develop. They indicate that the absence of record keeping, pressure of time, and the use of study groups are apt to stimulate cooperative solutions.[40]

Not every situation lends itself to problem solving, but there will be instances when

the parties see an advantage in using this approach. This will most likely occur when an item is perceived as a real problem and one side appeals to the other for help in developing a workable solution, or when a party expresses a need and requests the other team for assistance in meeting it. Pruitt contends that pure bargaining will be the dominate method of reaching agreement when bargaining power between opponent's is changing. Therefore, the fact that both teachers and boards are in the process of developing new "rules of the game" makes it doubtful if they will be able to successfully use mutual accommodation in reaching agreement on significant cost items. Costs are defined here in terms of faculty support for a teachers' team and loss of administrative autonomy and flexibility, and significant monetary increases to board of education.

Mixed Bargaining

Walton and McKersie in their theory of labor negotiations conceptualize a mix of distributive and integrative bargaining. These two opposite methods of reaching agreement in collective bargaining contain some of the same elements that were used to develop the major concepts in this formulation. They contend that by applying a soft or hard strategy to each basic method, a combination of four basic strategies in collective bargaining are developed. A modification of these selected strategies consists of: (1) a negotiator using accommodation to increase his own gains and the gains of his opponent by adopting a soft attitude toward sharing mutual gains (2) the negotiator choosing pure bargaining and a hard attitude toward his opponent (3) the negotiator choosing pure bargaining and adopting a soft attitude toward his opponent which would enable the opponent to obtain larger payoffs (4) the negotiator selecting accommodation methods to enhance joint gains and then developing harder attitudes toward his opponent so as to obtain a higher payoff. This combination of negotiating methods serves to shed light on some of the ways in which the basic methods can be combined. However, these combinations do not take into account the attitudes of one's opponent. The opponent may alter his strategy in such a manner so as to use the same or different combinations of the heretofore discussed strategies to obtain a higher or lower, short or long term, payoffs for himself.

In true bargaining negotiators may change strategies depending on the demands of the situation. Collective negotiation does not depend on a specific set of rules of play. It

is a dynamic process between two parties in which the strategies being used are not always clear. Therefore, the following simplifying assumptions are necessary to develop a sound basis for understanding mixed bargaining. It is assumed that mixed bargaining can be observed as the parties practice pure bargaining and/or accommodation methods. It is also assumed that a shift from an attitude that mirrors pure bargaining towards one that embodies elements of accommodation and one that shifts from mutual accommodation toward pure bargaining can be observed in a true bargaining situation.

Writings by Harbison and Coleman (1951)[41], Lasswell and Kaplan (1963)[42], Boulding (1963)[43] and others give rise to the premise that in viable organizations where parties bargain collectively over terms and conditions of employment, relationship patterns, regardless of how amiable they may be, will contain an element of conflict. However, in such relationships an element of cooperation is also present in inverse proportion to the degree of conflict.

The relationship that exists between parties who negotiate collectively differs from most legal arrangements for while most contractual relationships terminate after a period of time, as a result of natural processes or are severed in a court of law, the parties to a collective agreement participate in a continual relationship for as long as the institution remains operable and the parties continue to represent opposing factions. Similar to a marriage contract, the parties must live with one another and develop procedures that will facilitate their relationship. However, the nature of the relationship between the parties will depend on the degree of cooperation and conflict that exists between them and their ability to live with these phenomenon. Therefore, it is reasonable to assume that, as in the private sector, teacher-school board -- employee-employer relationship patterns will fall at points on a continuum between total conflict or complete cooperation.

Walton and McKensie and Harbison and Coleman advanced the notion that such a range could be used in the private sector to identify the differences in union management relationships. These relationships were not used to explain the ends sought by the parties but the means employed to achieve these ends. They contended that union-management accommodation relationships were rare but when they were identified they tended to occur in

small companies where working conditions and wage levels were equal to, or above, employee's benefits in other firms that were used as a reference group by employees, and where decision making was relatively simple and both union and management shared an informal relationship in which mutual respect was evident and problems were handled jointly by the parties.

It was also contended that economic conditions, changes in personnel and other factors could affect shifts toward either extreme. Various writers contend that when the power dimensions have not been tested and the relationship between the parties is in the developmental stages both parties tend to be insecure and suspicious of each other. There may be dangers in applying private sector notions literally to public education, yet these notions lend support to the premise that teacher-board relationships, as they are forged by the collective negotiations process, will develop patterns according to a set of meaningful criteria along a continuum of relationships that range from predominately "conflictual" to basically cooperative. However, the absence of an experience factor necessary for the formulation of such a continuum is evident. Nevertheless, this writer postulates the existence of such a continuum. Consequently, a school district in which the perceived level of conflict between the organizations is high may be referred to as a conflictual environment whereas a district in which a low level of conflict between the parties exists may be called a cooperative environment.

Based on the aforementioned statements and on the fact that collective negotiations is in the developmental stages in public education throughout the nation one assumes that there is a high probability that conflictual relationships exist between a majority of the boards of education and teacher organizations in the United States. Therefore, the investigator selected what he perceived to be a conflictual environment in which to test his formulation.

Procedures

Bargaining was studied in a thorough analytical case study of negotiations between a board of education and teachers' organization in New York State. Data was obtained from direct observations of negotiating sessions and teacher organization meetings, tape recordings of all negotiation and fact-finding sessions, pre-study questionnaires and ex post facto structured and unstructured interviews with members of the negotiating teams,

school officials and the mediator/fact-finder.

A thorough explanation of the rationale behind the development and use of each instrument used in the study is impractical in a paper such as this. However, an explanation regarding the use of the Changing Utility Model for Selected Numerically Based Pure Bargaining Issues (an adaption of a model developed by Ikle and Leites) in mapping dispositions and outcomes in negotiations appears to warrant attention.

Early in negotiations the investigator identified numerically based items such as salary requests for beginning teachers, leave days, etc. that the teachers had demanded of the board of education. Each negotiating team was asked separately to fill in a questionnaire in which they recorded their initial dispositions and perceived outcomes regarding the selected items. The questionnaires were sealed and kept from the investigator and the parties until after a contract had been signed. The investigator then plotted changes in dispositions and final outcomes by using the principles contained in the changing utility model.

The model can be used in the following manner. (See Figure) The teacher negotiator's minimal disposition at the outset of negotiations was ninety-four thousand dollars ($94,000) in total salary demands for their constituents. i.e. the teacher negotiating team estimated that they would prefer no agreement to an agreement that allowed for less than ninety-four thousand dollars ($94,000) in total salary increases. (The range of alternatives varies with the issue and is clarified by the negotiation process.) The teachers estimated that the board's minimal disposition was about one hundred sixty-three thousand dollars ($163,000), thus the teachers' estimated bargaining range extended from ninety-four thousand dollars ($94,000) to one hundred sixty-three thousand dollars ($163,000). This range, however, did not keep them from asking for more. They originally demanded a salary package that cost four hundred fifty thousand dollars ($450,000). Consequently, the teachers pretended that they thought this demand was within their expectations rather than a sham. The teachers actually believed they would obtain a payoff of about one hundred thousand dollars ($100,000) in salary increases.

An examination of the model on page 17 reveals that the school board's estimates were in opposition to the teachers' but that both perceived (even though neither was aware of the

disposition of the other in the early stages of bargaining) that they would settle for a total salary payoff of about one hundred thousand dollars ($100,000). As the reader can see, the board exceeded its originally perceived minimal disposition by granting an increase that exceeded its own and the teachers' original estimates by about thirty-five thousand dollars ($35,000). The board's move beyond its predetermined minimal disposition can be attributed to the teacher organization's rejection of the fact-finder's report, a hardening of the teacher team's negotiating posture and the organization's utilization of pure bargaining techniques. The board also had some reason to believe that its failure to move would result in a strike.

Major Findings

1. The investigator's conceptualization of bargaining methods can be used successfully to identify bargaining methods and understand the general dynamics of collective negotiations.
2. Pure bargaining was the dominant method used in reaching agreement. Mutual accommodation was rare and used only when the item negotiated represented insignificant costs to the board.
3. The Changing Utility Model for Selected Numerically Based Pure Bargaining Issues can be used successfully to chart dispositions, bargaining ranges and movements on selected items. It can also be used to compare the effect of payoffs on a negotiating team's preconceived notions of final outcomes.
4. Interviews with the parties revealed that the teacher negotiating team perceived the board's employment of a professional negotiator as a hostile act. However, the district's bargaining power on all but salary items appeared to be increased by the external negotiator's superior knowledge of pure bargaining tactics.
5. The teacher negotiator's preconceived notions of the importance of items and their bargaining rigidity on most items were based on their aspirations rather than on their perception of their ability to obtain desired outcomes.
6. Inter-organizational conflict between the school board and the teachers' organization, and the organization's inability to effectuate changes in the board's posture toward teachers fostered frustrations and gave rise to intra-organ-

izational conflict within the teachers' organization.

7. The mediator/fact-finder based his report on the positions of the parties in mediation and suggested a settlement that both parties had indicated that they could accept.

Hypotheses and Questions

The writer's formulation as applied to true bargaining situations gives rise to hypotheses and research questions that may merit further investigation.

H.-1. Negotiation dyads that are in the process of developing "rules of the game" and testing their overall bargaining power will be more apt to obtain contractual agreements by using predominately pure bargaining methods than those that have established power dimensions and have displayed a degree of mutual respect. The latter will be more apt, when more knowledgeable of the various negotiation methods available to them, to take risks to promote mutual accommodation bargaining.

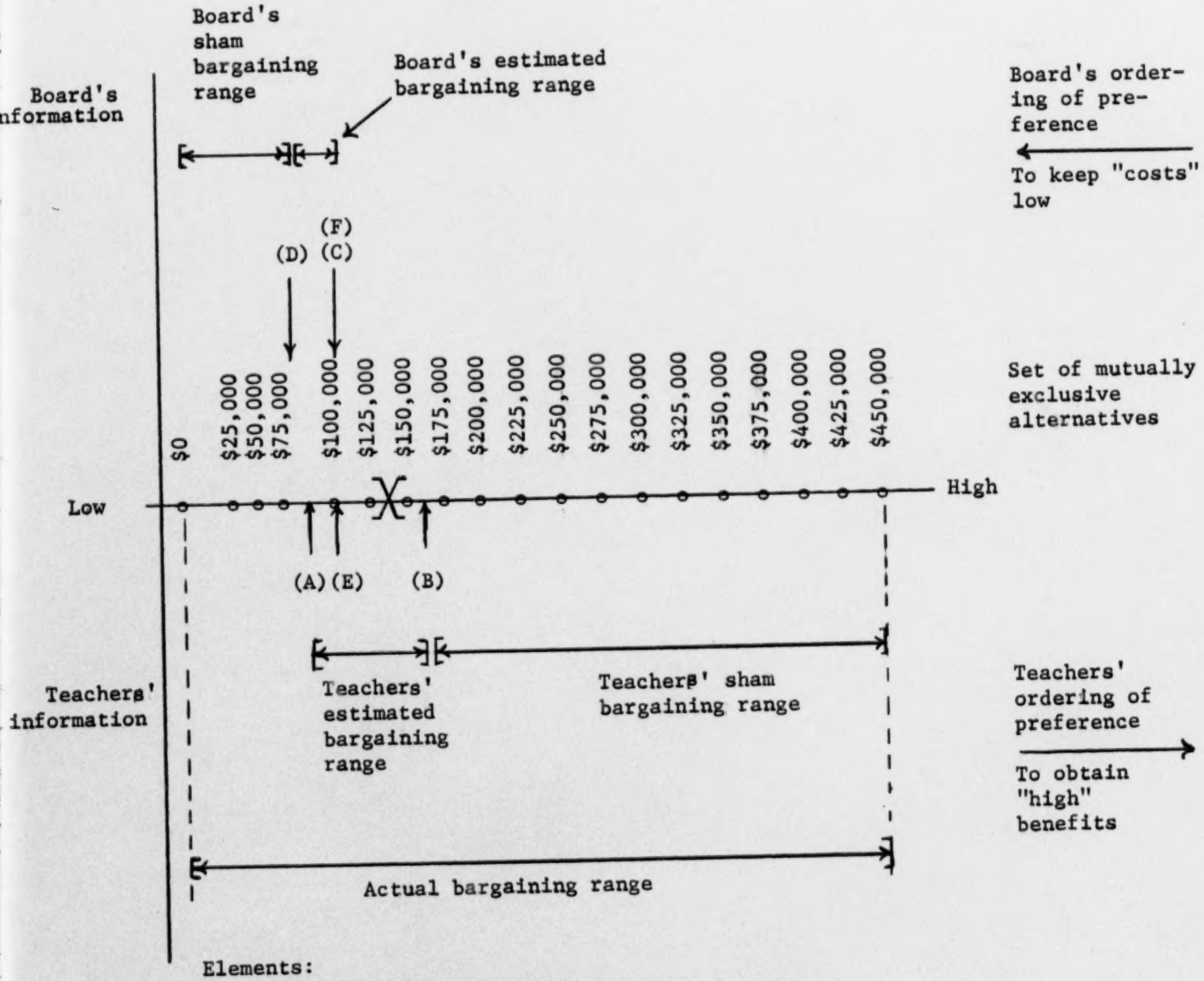
H.-2. Mutual accommodation methods of bargaining are more apt to occur in established negotiation dyads in small school districts that have relatively flat organizational patterns than in large bureaucratized school districts.

Q.-1. Can the changing utility model be used in selected negotiation dyads in a longitudinal study to reveal if bargaining ranges shrink on selected numerically based items as bargaining relationships mature?

Q.-2. Over a period of time can the changing utility model be used to analyze dispositions and moves in negotiations on selected items common to a large number of school districts?

Q.-3. Will mediator/fact-finder recommendations be more acceptable to a large sample of opposing parties than fact-finder's recommendations?

Figure 1 - Changing Utility Model for the District's Total Dollar Salary Increase



Elements:

A Teachers' minimum disposition
B Teachers' estimate of Board's minimum disposition
C Board's minimum disposition
D Board's estimate of Teachers' minimum disposition
E Teachers' estimated probable outcome
F Board's estimated probable outcome

$0 - $78,000 Board's sham bargaining range
$78,000 - $100,000 Board's estimated bargaining range
$94,000 - $163,000 Teachers' estimated bargaining range
$163,000 - $460,000 Teachers' sham bargaining range
X Payoff - About $135,000

References

1. Dean G. Pruitt, Negotiations as a Form of Social Behavior, Report No. 6 to the Office of Naval Research, Washington, October 26, 1968, Department of Psychology, State University of New York at Buffalo, p. 1.

2. Thomas C. Schelling, The Strategy of Conflict, (Cambridge: Harvard University Press, 1960).

3. Richard E. Walton and Robert B. McKersie, A Behavioral Theory of Labor Negotiations, (New York: McGraw-Hill Book Co., 1965).

4. Pruitt, op. cit.

5. Carl Stevens, "On the Theory of Negotiations," The Quarterly Journal of Economics, LXXII, (Feb., 1958), p. 93.

6. Neil W. Chamberlain and James W. Kuhns, Collective Bargaining (New York: McGraw-Hill, 1965), p. 172.

7. Abraham Kaplan, "Power in Perspectives," Power and Conflict in Organizations, ed. Robert L. Kahn and Elise Boulding, (New York: Basic Book Co., 1964), p. 12.

8. Donald K. Goe, A Comparison of Behaviors in Teacher Negotiations and the Character of Teacher-Administrator Relationships, Colorado State College, cited in Dissertation Abstracts, XXVIII (Feb., 1968), p. 2940 A.

9. Otmar J. Bartos, Predictive Model for Intergroup Negotiations, A Report to the United States Air Force Office of Social Research, No. 62-314, Washington: June 30, 1964, University of Hawaii, p.9.

10. Pruitt, op. cit., pp. 5, 10.

11. Ibid.

12. Thomas C. Schelling, "The Strategy of Conflict: Prospectus for a Reorientation of Game Theory." The Journal of Conflict Resolution, III (Sept., 1958), p. 220.

13. Morton Bautsch and Robert M. Knauss, "Studies of Interpersonal Bargaining," The Journal of Conflict Resolution, VI (March, 1962), p. 53.

14. Schelling, "The Strategy of Conflict: Prospectus for a Reorientation of Game Theory," op. cit., p. 223.

15. Ibid.

16. Ibid., pp. 223-224.

17. Ibid. p. 224.

18. Anator Rapoport, Strategy and Conscience, (New York: Harper and Row Co., 1964), p. 3.

19. Fred C. Ikle and Nathan Leites,"Political Negotiations as a Process of Modifying Utilities," The Journal of Conflict Resolution, VI (March, 1962), p. 3.

20. Pruitt, op. cit., p. 9.

21. Ikle and Leites, op. cit., p. 20.

22. Pruitt, op. cit., p. 9.

23. Schelling, "The Strategy of Conflict: Prospectus for a Reorientation of Game Theory," op. cit., p. 224.

24. Pruitt, op. cit., p. 10.

25. Ibid., p. 10.

26. Ibid., p. 11.

27. Richard E. Walton and Robert S. McKersie, op. cit., p. 117.

28. Dean G. Pruitt, "Indirect Communications in Negotiations," (unpublished article, Department of Psychology, State University of New York at Buffalo, March 18, 1968), p. 1.

29. Otmar J. Bartos, "A Model of Negotiations and Regency Effect," Sociometry, XXVII, (September, 1964), p. 6.

30. Schelling, "The Strategy of Conflict; Prospectus for a Reorientation of Game Theory," op. cit.

31. Ikle and Leites, op. cit.

32. Walton and McKersie, op. cit.

33. Ikle and Leites, op. cit., p. 20.

34. Ibid.

35. Ibid., pp. 20 - 21.

36. Ibid., p. 11.

37. Ibid., p. 22.

38. Walton and McKersie, op. cit., p. 127

39. Ibid., p. 139.

40. Ibid., p.p. 150, 159.

41. Fredrick H. Harbison and John R. Coleman, Goals and Strategy in Collective Bargaining, (New York: Harper and Brothers Press, 1951) p. 2.

42. Harold D. Lasswell and Abraham Kaplan, Power and Society, (New Haven: Yale University Press, 1963), p. 100.

43. Kenneth Boulding, Conflict and Defense, (New York: Harper and Row Co., 1963), p. 153.